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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
KRYLOVA, IRINA				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Attachment to Advisory Action

1. Applicant's response filed on 05/27/2009 has been fully considered but is not persuasive.
2. Applicant argues that neither **Miyajima et al** nor **Kamoshita et al** disclose or suggest the claimed combination of 50-85%wt of [A] a grafted acrylic rubber, 3-25%wt of [B] a grafted diene rubber, [D] vinyl copolymer with 30-50mass% of bonded vinyl cyanide and [E] vinyl copolymer with vinyl cyanide in an amount of less than 30%mass.

As to rejection of the instant claims 2-5, 7-11 over **Miyajima et al**.

3. Applicant refers to col. 2, lines 44-67 of **Miyajima et al**, showing that both butadiene rubbers and acrylic rubbers are allowed as mixtures of rubbers, but the specific percentage ratios between these rubbers are not presented.

4. Examiner disagrees.

Miyajima et al discloses a thermoplastic resin composition comprising (col. 7, lines 32-35):

A) 5-99% of a modified acrylic rubber obtained by polymerizing:

- a) 50-85%wt of an **acrylic rubber** (col. 2, lines 45-67);
- b) 5-48%wt of an aromatic vinyl compound;
- c) 2-45%wt of a vinyl cyanide (col. 2, lines 32-40)

B) 1-95%wt of additional thermoplastic resin used alone or in **combination of two or more** comprising:

1) rubber-modified thermoplastic resin obtained by polymerizing a monomer mixture comprising an aromatic vinyl compound and a vinyl cyanide in the presence of a rubbery polymer, wherein the rubbery polymer comprises a **diene rubber** (col. 6, lines 35-47; col. 2, lines 44-50);

2) copolymers obtained by polymerizing a monomer mixture comprising an **aromatic vinyl compound** and a **vinyl cyanide**, wherein the proportion of the vinyl cyanide is **1 to 50% by weight** (col. 6, lines 54-67; col. 7, lines 1-5).

5. Examiner refers *notto* the mixture of grafted butadiene rubber and grafted acrylic rubber, cited in col. 2, lines 44-67 of **Miyajima et al**, but rather refers to an additional diene rubber-modified thermoplastic resin in amount 1-95%wt, cited in col. 6, lines 54-67; col. 7, lines 1-5 of **Miyajima et al**.

6. The ratios between:

1) the grafted acrylic rubber A), rubber-modified thermoplastic resin in combination with polymerized monomer mixture comprising an aromatic vinyl compound and a vinyl cyanide B) of **Miyajima et al** , and

2) the components [A], [B], [D], [E] claimed in the instant invention, are overlapping, and overlapping have been held to establish *prima facie* obviousness.

7. Applicant argues that **Miyajima et al** teaches the composition having high flexural modulus, referring to Table 2 of **Miyajima et al**. However, flexural modulus cited by **Miyajima et al** in Table 2 is in the range 20,600-24,300 kgf/cm², whereas flexural modulus of the composition claimed in the instant invention is 1000-2200 MPa (10,197-22,433 kg/cm²). Although not all flexural modulus values given in Table 2 of **Miyajima et al** fall within the range for flexural modulus values claimed in the instant invention, it is the examiner's position that all the values are close enough that one of ordinary skill in the art would have expected the same properties. Case law holds that a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

8. Since

1) the ratios between the grafted acrylic rubber, grafted butadiene rubber and copolymer of aromatic vinyl compound and a vinyl cyanide of **Miyajima et al** and those components claimed in the instant invention, are overlapping;

2) such properties as flexural modulus and coefficient of linear expansion, claimed in the instant invention, depend on the relative amounts of each of the reinforced acrylic rubber, reinforced diene rubber, a copolymer of aromatic vinyl compound and a vinyl cyanide, such limitation as relative proportions of reinforced acrylic rubber, reinforced

diene rubber, a copolymer of aromatic vinyl compound and a vinyl cyanide, becomes a result effective variable,

therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to make variations in the content of each of the cited components of the composition of **Miyajima et al** to obtain the desired combination of flexural modulus and coefficient of linear expansion of the composition of **Miyajima et al**.

In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05 II).

9. As to rejection of the instant claims 2-5, 7-11 over **Kamoshita et al**.

The Applicant argues that the **Kamoshita et al** discloses a composition having content of vinyl cyanide below 30%wt in examples C-1 and C-6, showing "poor resistance to strain in an atmosphere of refrigerants", therefore, the composition shows decreased performance.

10. Examiner disagrees. Though the examples given in C-1 and C-4, having the content of vinyl cyanide 25%wt, are showing poor critical strain value, nevertheless, as seen from comparing all examples given in Table 3 of **Kamoshita et al**, the examples C-1 and C-4, having the content of vinyl cyanide 25%wt, are showing flexural modulus value being lower and closer to the flexural modulus value claimed in the instant invention. Therefore, it would have been obvious to a one skilled in the art at the time of the invention was made that adding vinyl cyanide/aromatic vinyl compound having lower content of vinyl cyanide (less than 30%wt) would result in compositions having lower

flexural modulus. Such limitation as amount of vinyl cyanide/aromatic vinyl compound having lower content of vinyl cyanide (less than 30%) becomes a result effective variable, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to make variations in the content of added vinyl cyanide/aromatic vinyl compound having lower content of vinyl cyanide (less than 30%) to obtain compositions having desired flexural modulus.

11. Though **Kamoshita et al** does not specify other properties, such as flexibility, coating property, weather resistance, peeling property, however, since these properties depend on specific relative proportions of the components in the composition, therefore, specific relative proportions of the grafted acrylic rubber, grafted diene rubber, copolymer of vinyl cyanide and aromatic vinyl compound having different content of vinyl cyanide, become a result effective variable, therefore, it would have been obvious to one skilled in the art at the time of the invention was made, to make variations in the content of each of the cited components of the composition of **Kamoshita et al** to obtain the desired combination of flexural modulus, coefficient of linear expansion, coating property, weather resistance, peeling property of the composition of **Kamoshita et al**. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP 2144.05 II).

12. An obvious double patenting rejection over claim s1-2 of US 5,229,457.

Applicant argues that neither claim 1 or claim 2 of US 5,229,457 claims a vinyl copolymer having a vinyl cyanide content of less than 30%. Examiner disagrees. Parts of the specification of US 5,229,457 were used in this ODP rejection. Case law holds that those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent. In re Vogel, 422 F.2d 438, 164 USPQ 619,622 (CCPA 1970).

13. Specifically, see the discussion with respect to the use of the vinyl copolymer having a vinyl cyanide content of less than 30%, set forth in paragraphs 9-11 above.

14. Applicant argues that US patent 5,229,457 is assigned to Monsanto Kasei Company of Tokyo, Japan, whereas the instant application is assigned to Techno Polymer Co, Ltd, and there is insufficient evidence of common ownership to support a rejection. Examiner disagrees. According to MPEP Chapter 804, Chart II-A, an obvious double patenting rejection is applicable in an event when there are different inventive entities, there is no common assignee and there is at least one common inventor. In the present case, though the assignees are different (Monsanto Kasei Company versus Techno Polymer Co, Ltd), however, there is one common inventor, Hiroki Kashiwagi. Therefore, the obvious double patenting rejection is still valid.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irina Krylova whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan Jagannathan can be reached on (571)272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/I. K./
Examiner, Art Unit 1796

/Vasu Jagannathan/
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